IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANT

Ex parte Franck LE

METHOD AND APPARATUS FOR CLASSIFYING IP DATA

Serial No. 09/834,918
Appeal No.:
Group Art Unit: 2121

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In re the Appellant:

Franck LE

Appeal No.:

Serial Number: 09/834,918

Group Art Unit: 2121

Filed: April 16, 2001

Examiner: Sunray Chang

For: METHOD AND APPARATUS FOR CLASSYING IP DATA

BRIEF ON APPEAL

April 25, 2006

I. INTRODUCTION

This is an appeal from the final rejection set forth in an Official Action dated September 27, 2005, finally rejecting claims 1-37, all of the claims pending in this application. Claims 1, 8-13, 20-25 and 33-37 stand rejected under 35 U.S.C. 102(e) as being anticipated by Walrand (U.S. Patent No. 6,674,760). Claims 2-4, 14-16, 26-28 and 29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Walrand, in view of Jorgensen (U.S. Patent No. 6,452,915). Claims 5-7, 17-19, and 30-32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walrand in view of Jorgensen and further in view of Narad (U.S. Patent No. 6,157,955). A Pre-Appeal Brief Request for Review, PTO/SB/33, Notice of Appeal, and Petition for Extension of Time were timely filed on January 13, 2006. A Notice of Panel Decision from Pre-Appeal Brief Review was issued on March 10, 2006, indicating that claims 1-37 are still rejected. This Appeal Brief is being timely filed.

II. REAL PARTY IN INTEREST

The real parties in interest in this application are Nokia Corporation, of Espoo, Finland, by virtue of an Assignment which was submitted for recordation on November 15, 2001, and which was recorded at Reel 012310, Frame 0632, on November 15, 2001.

III. STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no known related appeals and/or interferences which will directly effect or be directly effected by or have a bearing on the Board's decision in this appeal.

IV. STATUS OF CLAIMS

Claims 1-37, all of the claims pending in the present application, are rejected as being unpatentable over certain prior art. Specifically, the rejection of Claims 1, 8-13, 20-25, and 33-37 under 35 U.S.C. 102(e) as being anticipated by Walrand (U.S. Patent No. 6,674,760), the rejection of claims 2-4, 14-16, 26-28, and 29 under 35 U.S.C. 103(a) as being unpatentable over Walrand in view of Jorgensen (U.S. Patent No. 6,452,915), and the rejection of claims 5-7, 17-19, and 30-32 under 35 U.S.C. §103(a) as being unpatentable over Walrand in view of Jorgensen and further in view of Narad (U.S. Patent No. 6,157,955) are the subject of this appeal.

V. STATUS OF AMENDMENTS

Claims 1-5, 12-17, 22, 25-30, 32, 33, and 35-37 were amended in an Amendment which was filed on April 18, 2005, and which was entered. Claims 1-37 are pending.

VI. SUMMARY OF THE INVENTION

According to certain embodiments of the present invention, a method of classifying Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus in a packet switched network is provided. The method may include receiving the data, including a routing header, at a first node and classifying the data at the first node based on source routing information of the data. The source routing information may be provided within a destination field of a routing header for IPv6 or may be provided within LSRR/SSRR of the data for IPv4. Specification, page 2, lines 16-24.

Embodiments of the invention may further include reserving resources of nodes from the source apparatus to the destination apparatus. This may include forwarding a request from the source apparatus to the first node. Specification, page 2, lines 25-28.

The routing header of the present invention, as illustrated in Fig. 4, may include a next header field 302, a header extension length field 304, a routing type field 306, a segments left field 308, and a type-specific data field 310. The next header field 302 may store information identifying the type of header immediately following the routing header. The header extension length field 304 may store information indicating the length of the routing header. The routing type field 306 may store information indicating the variant of the routing header. The segments left field 308 may store a value indicating the number of route segments still remaining to be visited by the packet before the destination is reached, and the type-specific data field 310 may store information including the addresses of the nodes to be visited by the packet. Specification, page 6, line 24 – page 7, line 10.

The method of the present invention may additionally include forwarding the data

from the first node to the second node and classifying the data at the second node based on source routing information of the data. More specifically, according to embodiments of the invention, when an RSVP node receives an IPv6 packet with the presence of a routing header and the segments left field is not 0, the node may classify the destination of the flow based on the last entry in the routing header. This may be the real address node that the RSVP is to be sent to rather than the destination address field in the IPv6 packet. This solves the problem of classifying a flow when a routing header is present in the IPv6 packet. Specification, page 12, lines 11-20.

Certain embodiments of the invention may also provide a router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus. The router may include a receiving device to receive the IP data at a first node and a processor device coupled to the receiving device to receive the IP data and to classify the data at the first node based on source routing information. Specification, page 3, lines 10-17.

VII. ISSUES

The issues on appeal are whether the rejections of claims 1-37 discussed above are in error. As will be discussed below, this Appeal Brief will show that these rejections should be reversed, and this application passed to issue.

VIII. GROUPING OF CLAIMS

Applicants respectfully submit that each of claims 1-37 stands alone. In other words, each of the presently pending claims is separately patentable.

IX. APPELLANT'S ARGUMENTS

Applicants respectfully submit that each of pending claims 1-37 recites subject matter which is neither disclosed nor suggested by the cited prior art.

The Office Action stated that claims 1, 8-13, 20-25 and 33-37 were rejected under 35 U.S.C. 102(e) as being anticipated by Walrand (U.S. Patent No. 6,674,760). The rejection is traversed as being based on a reference that neither teaches nor suggests all of the features clearly recited in the claims.

Claim 1, upon which claims 2-4 and 8-12 are dependent, recites a method of classifying Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus in a packet switched network. The method includes the step of receiving the data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The method also includes the step of classifying the data at the first node based on an entry in the header.

Claim 13, upon which claims 14-16 and 20-24 are dependent, recites a router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus. The router includes means for receiving the IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The router also includes means for classifying the IP data at the first node based on an entry in the header.

Claim 25, upon which claims 26-29 and 33-37 are dependent, recites a router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus. The router includes a receiving

device to receive the IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The router further includes a processor device coupled to the receiving device for receiving the IP data and for classifying the data at the first node based on an entry in the header.

It is respectfully submitted that Walrand fails to disclose or suggest the subject matter of the presently pending claims, and that Walrand therefore fails to provide the features provided by the present invention.

Walrand discloses a system and method for implementing end-to-end QoS for both inter-subnet and intra-subnet communications. The first accessed node in a subnetwork that receives an IP packet, classifies the packet based upon the IP destination address, the IP source address, and a class of service identifier. Based upon this classification, the node recognizes which end-to-end connection the packet belongs to. Once classified, the node can allocate the resources necessary or otherwise provide a quality of service for the specific connection classification.

As outlined in MPEP §2131, in order for a reference to anticipate a claim, the reference must teach every element of the claim. A claim is only anticipated if each and every element of the claim is described, either inherently or expressly, in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628 (Fed. Cir. 1987).

Applicants respectfully submit that the Office Action has failed to establish a prima facie case for anticipation since Walrand fails to disclose or suggest all of the elements of the claims. Specifically, Applicants respectfully assert that Walrand does not disclose or suggest receiving data at a first node, the data comprising a header comprising a list

of at least one intermediate node to be visited on a way to the destination apparatus, as recited in present claims 1, 13, and 25. Walrand only discloses that the network communicates data through the use of IP packets, each of which include an IP header 200 (see Figure 2). Walrand further discloses that the IP header may include a source address field 208, a destination address field 210, and a type of service field 206 (Walrand, Column 3, lines 15-27). However, Walrand makes no mention of a list of intermediate nodes included in the IP header. As a result, Walrand certainly does not disclose or suggest that a list of at least one intermediate node that should be visited on the way to the destination apparatus is included in the header. Therefore, Walrand does not disclose or suggest that the IP header includes a list of at least one intermediate node to be visited on a way to the destination apparatus, as recited in the present claims.

The Office Action appears to take the position that the header disclosed in Walrand may specify which of the subnets the data is to visit. The Office Action refers to Column 2, lines 26-31 of Walrand, which states that data streams may be classified for both inter-subnet and intra-subnet connections using only information provided in the headers. As such, the Office Action concludes that Walrand teaches that the streams may be classified based on information provided in the header. However, Walrand does not disclose or suggest that the header specifies a specific subnet that is to be visited on a way to the destination apparatus. Therefore, Applicants respectfully submit that Walrand fails to disclose or suggest receiving data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus, as recited in present claims 1, 13, and 25. Accordingly, Walrand fails to disclose or suggest all of the elements of claims 1, 13, and 25.

Therefore, Applicants respectfully submit that the Office Action has failed to establish a prima facie case for anticipation with respect to claims 1, 13, and 25. Accordingly, Applicants respectfully request that the rejection of claims 1, 13, and 25 be reversed and these claims allowed.

Claims 8-12 are dependent upon claim 1 and recite additional limitations. Claim 8 recites that the "data is received at said first node from said source apparatus," claim 9 recites "reserving resources of nodes from said source apparatus to said destination apparatus," claim 10 recites that "reserving said resources comprises forwarding a request from said source apparatus to said first node," claim 11 recites "storing said source information at said first node," and claim 12 recites "forwarding said data from said first node to a second node; and classifying said data at said second node based on said entry in said header." It is respectfully submitted that claims 8-12 recite subject matter which is neither disclosed nor suggested by Walrand. As such, Applicants respectfully request that the rejection of claims 8-12 be reversed and these claims allowed.

Claims 20-24 are dependent upon claim 13 and include additional limitations. Claim 20 recites "wherein said IP data is received at said means for receiving from said source apparatus," claim 21 recites "wherein said means for classifying reserves resources of nodes from said source apparatus to said destination apparatus," claim 22 recites "wherein reserving said resources comprises forwarding a request from said source apparatus to said first node," claim 23 recites "means for storing said source routing information in memory," and claim 24 recites "means for forwarding said data from said first node to a second node." It is respectfully asserted that claims 20-24 recite subject matter which is neither disclosed nor suggested by Walrand. As such, Applicants

respectfully request that the rejection of claims 20-24 be reversed and these claims allowed.

Claims 33-37 are dependent upon claim 25 and recite additional limitations. For example, claim 33 recites "wherein said data including said header is received at said first node from said source apparatus." Claim 34 recites "wherein said processor device reserves resources of nodes from said source apparatus to said destination apparatus," claim 35 recites "wherein reserving said resources comprises forwarding a request from said source apparatus to said first node," claim 36 recites "a memory device for storing said source routing information," and claim 37 recites "a forwarding device coupled to said processor device for forwarding said data from said first node to a second node." It is respectfully submitted that claims 33-37 recite subject matter which is neither disclosed nor suggested by Walrand. As such, Applicants respectfully request that the rejection of claims 33-37 be reversed and these claims allowed.

For at least the reasons discussed above, Applicants respectfully submit that the Office Action has failed to establish a prima facie case for anticipation with respect to claims 1, 8-13, 20-25 and 33-37. Accordingly, Applicants respectfully request that the rejection of claims 1, 8-13, 20-25 and 33-37 be reversed and these claims allowed.

The Office Action rejected claims 2-4, 14-16, 26-28, and 29 under 35 U.S.C. §103(a) as being unpatentable over Walrand in view of Jorgensen (U.S. Patent No. 6,452,915). The Office Action took the position that Walrand discloses all of the elements of the claims, with the exception of the data for IPv6. The Office Action then relies upon Jorgensen as allegedly curing this deficiency in Walrand. The rejection is traversed as being based on a combination of references that neither disclose nor

suggest all of the features clearly recited in the claims.

In rejecting claims under 35 USC §103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. In re Fine, 837 F.2d 1071,1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In doing so, the PTO is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reasons must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S.825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F2d. 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the PTO are an essential part of complying with the burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

Further, to establish prima facie obviousness of a claimed invention, all the claimed limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

If the PTO fails to meet this burden, the Applicant is entitled to a patent. In re

Glaug, 62 USPQ2d 1151 (Fed. Cir. 2002). In the present case, discussed in detail below, Applicants respectfully submit the PTO has failed to meet this burden.

Walrand is discussed above. Jorgensen discloses an IP flow classification system for grouping IP flows in a packet-centric wireless point to multi-point telecommunications system. The classification system includes a wireless base station coupled to a first data network, one or more host workstations coupled to the first data network, one or more subscriber customer premise equipment (CPE) stations in wireless communication with the wireless base station over a shared bandwidth using a packet-centric protocol, and one or more subscriber workstations coupled to each of the subscriber CPE stations over a second network. A resource allocation device optimizes end-user quality of service (QoS) and allocates shared bandwidth among the subscriber CPE stations, and an analyzing and scheduling device analyzes and schedules internet protocol (IP) flow over the shared wireless bandwidth.

Claims 2-4, 14-16, 26-28, and 29 are dependent upon claims 1, 13, and 25, respectively, and recite additional limitations. As discussed above, Walrand fails to disclose or suggest all of the elements of claims 1, 13, and 25 since Walrand fails to disclose or suggest that the IP header includes a list of at least one intermediate node to be visited on a way to the destination apparatus. Furthermore, Jorgensen also does not disclose or suggest that the IP header includes a list of at least one intermediate node to be visited on a way to the destination apparatus. As such, the combination of Walrand and Jorgensen does not disclose or suggest all of the elements of claims 2-4, 14-16, 26-28, and 29.

For example, the combination of Walrand and Jorgensen does not disclose or

suggest "wherein said classifying is based on a destination address provided within said header," as recited in claims 3, 15, and 27. The combination of Walrand and Jorgensen also does not disclose or suggest that the "classifying is based on information within said last destination address field of said header," as recited in claims 4, 16, and 28.

Therefore, Applicants respectfully assert that Walrand and Jorgensen, whether viewed singly or combined, fail to disclose or suggest all of the elements of claims 2-4, 14-16, 26-28, and 29. Accordingly, Applicants respectfully request that the rejection of claims 2-4, 14-16, 26-28, and 29 be reversed and these claims allowed.

In the Office Action, claims 5-7, 17-19, and 30-32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Walrand in view of Jorgensen and further in view of Narad (U.S. Patent No. 6,157,955). The Office Action took the position that Walrand and Jorgensen disclose all of the elements of the claims, with the exception of the entry being provided within one of LSRR and SSRR of the data for IPv4. The Office Action then relies upon Narad as allegedly curing this deficiency in Walrand and Jorgensen. The above rejection is respectfully traversed for the reasons which follow.

Claim 5, upon which claims 6 and 7 are dependent, recites a method of classifying Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus in a packet switched network. The method includes the step of receiving the data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The method also includes the step of classifying the data at the first node based on an entry in the header. The entry is provided within one of LSRR and SSRR of the data for IPv4.

Claim 17, upon which claims 18 and 19 are dependent, recites a router for use in

a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus. The router includes means for receiving the IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The router further includes means for classifying the IP data at the first node based on an entry in the header. The entry in the header is provided within one of LSRR and SSRR of the data for IPv4.

Claim 30, upon which claims 31 and 32 are dependent, recites a router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus. The router includes a receiving device to receive the IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus. The router further includes a processor device coupled to the receiving device to receive the IP data and to classify the data at the first node based on an entry in the header provided within one of LSRR and SSRR of the data for IPv4.

As will be discussed below, Walrand, Jorgensen, and Narad, whether viewed singly or combined, fail to disclose or suggest all of the elements of the claims, and therefore fail to provide the features discussed above.

Walrand and Jorgensen are discussed above. Narad discloses a packet processing system including a policy engine with a classification unit. The steps of packet processing are divided into a multiplicity of pipeline stages and provided with different functional units for different stages. Custom, specialized Classification Engines, which are micro-programmed processors optimized for the various functions common in

predicate analysis and table searches, are provided, and are each used as pipeline stages in different flows. In addition, a general-purpose microprocessor is provided for executing the arbitrary actions desired by these applications, and a tightly-coupled encryption coprocessor is provided to accelerate common network encryption functions.

Claims 5, 17, and 30 include the limitation of receiving data at a first node, the data comprising a header including a list of at least one intermediate node to be visited on a way to the destination apparatus. As discussed above in reference to claims 1, 13, and 25, Applicants respectfully submit that the combination of Walrand and Jorgensen fails to disclose or suggest this limitation of the claims. Furthermore, Narad also does not disclose or suggest this limitation of the claims, and therefore fails to cure the deficiency in Walrand and Jorgensen. Therefore, Applicants submit that Walrand, Jorgensen and Narad, whether considered alone or in combination, do not disclose or suggest that the header includes a list of at least one intermediate node to be visited on a way to the destination apparatus, as recited in claims 5, 17, and 30. As such, Applicants respectfully request that the rejection of claims 5-7, 17-19, and 30-32 be reversed.

For all of the above noted reasons, it is strongly contended that certain clear differences exist between the present invention as claimed in claims 1-37 and the prior art relied upon by the Examiner. It is further contended that these differences are more than sufficient that the present invention would not have been obvious to a person having ordinary skill in the art at the time the invention was made.

This final rejection being in error, therefore, it is respectfully requested that this honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of application claims 1-37.

In the event that this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees which may be due with respect to this paper may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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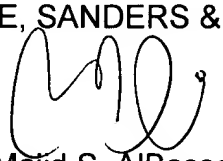

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Encls: Appendix 1
Appendix 2

APPENDIX 1

CLAIMS ON APPEAL

1. (Previously Presented) A method of classifying Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus in a packet switched network, said method comprising:

receiving said data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

classifying said data at said first node based on an entry in said header.

2. (Previously Presented) The method of claim 1, wherein said entry is provided within said header of said data for IPv6.

3. (Previously Presented) The method of claim 2, wherein said classifying is based on a destination address provided within said header.

4. (Previously Presented) The method of claim 2, wherein said header comprises a segments left field, a first destination address field and a last destination address field, and said classifying is based on information within said last destination address field of said header.

5. (Previously Presented) A method of classifying Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus in a packet switched network, said method comprising:

receiving said data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

classifying said data at said first node based on an entry in said header; and wherein said entry is provided within one of LSRR and SSRR of said data for IPv4.

6. (Original) The method of claim 5, wherein said classifying is based on a destination address provided within said one of LSRR and SSRR of said data for IPv4.

7. (Original) The method of claim 5, wherein said one of LSRR and SSRR of said data for Ipv4 comprises a first destination address field and a last destination address field, and said classifying is based on information within said last destination address field of said one of LSRR and SSRR of said data for Ipv4.

8. (Original) The method of claim 1, wherein said data is received at said first node from said source apparatus.

9. (Original) The method of claim 1, further comprising reserving resources

of nodes from said source apparatus to said destination apparatus.

10. (Previously Presented) The method of claim 9, wherein reserving said resources comprises forwarding a request from said source apparatus to said first node.

11. (Previously Presented) The method of claim 1, comprising storing said source routing information at said first node.

12. (Previously Presented) The method of claim 1, further comprising:

forwarding said data from said first node to a second node; and

classifying said data at said second node based on said entry in said header.

13. (Previously Presented) A router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus, said router comprising:

means for receiving said IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

means for classifying said IP data at said first node based on

an entry in said header.

14. (Previously Presented) The router of claim 13, wherein said source routing information is provided within said header of said data for IPv6.

15. (Previously Presented) The router of claim 14, wherein said classifying is based on a destination address provided within said header.

16. (Previously Presented) The router of claim 14, wherein said header comprises a segments left field, a first destination address field and a last destination address field, and said means for classifying classifies said IP data based on information of said last destination address field of said header.

17. (Previously Presented) A router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus, said router comprising:

means for receiving said IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

means for classifying said IP data at said first node based on an entry in said header wherein said entry in said header is provided within one of LSRR and SSRR of said data for IPv4.

18. (Original) The router of claim 17, wherein said classifying is based on a destination address provided within said one of LSRR and SSRR of said data for I Pv4.

19. (Original) The router of claim 17, wherein said one of LSRR and SSRR of said data for IPv4 comprises a first destination address field and a last destination address field, and said classifying is based on information within said last destination address field of said one of LSRR and SSRR of said data for IPv4.

20. (Original) The router of claim 13, wherein said IP data is received at said means for receiving from said source apparatus.

21. (Original) The router of claim 13, wherein said means for classifying reserves resources of nodes from said source apparatus to said destination apparatus.

22. (Previously Presented) The router of claim 21, wherein reserving said resources comprises forwarding a request from said source apparatus to said first node.

23. (Original) The router of claim 13, further comprising means for storing said source routing information in memory.

24. (Original) The router of claim 13, further comprising:

means for forwarding said data from said first node to a second node.

25. (Previously Presented) A router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus, said router comprising:

a receiving device to receive said IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

a processor device coupled to said receiving device for receiving said IP data and for classifying said data at said first node based on an entry in said header.

26. (Previously Presented) The router of claim 25, wherein said entry is provided within said header of said data for IPv6.

27. (Previously Presented) The router of claim 26, wherein said classifying is based on a destination address provided within said header.

28. (Previously Presented) The router of claim 26, wherein said header comprises a segments left field, a first destination address field and a last destination address field, and said processor device classifies said IP data based on information in said last destination address field of said header.

29. (Previously Presented) The router of claim 28, wherein said processor device classifies said IP data based on information in said last destination address field of said header.

30. (Previously Presented) A router for use in a packet switched network for transmission of Internet Protocol (IP) data to be sent from a source apparatus to a destination apparatus, said router comprising:

a receiving device to receive said IP data at a first node, the data comprising a header comprising a list of at least one intermediate node to be visited on a way to the destination apparatus; and

a processor device coupled to said receiving device to receive said IP data and to classify said data at said first node based on an entry in said header provided within one of LSRR and SSRR of said data for IPv4.

31. (Original) The router of claim 30, wherein said classifying is based on a destination address provided within said one of LSRR and SSRR of said data for I Pv4.

32. (Previously Presented) The router of claim 30, wherein 1 said one of LSRR and SSRR of said data for IPv4 comprises a first destination address field and a last destination address field, and said classifying is based on information within said last destination address field of said one of LSRR and SSRR of said data for I Pv4.

33. (Previously Presented) The router of claim 25, wherein said data including said header is received at said first node from said source apparatus.

34. (Original) The router of claim 25, wherein said processor device reserves

resources of nodes from said source apparatus to said destination apparatus.

35. (Previously Presented) The router of claim 34, wherein reserving said resources comprises forwarding a request from said source apparatus to said first node.

36. (Previously Presented) The router of claim 25, further comprising a memory device for storing said source routing information.

37. (Previously Presented) The router of claim 25, further comprising:

a forwarding device coupled to said processor device for forwarding said data from said first node to a second node.

APPENDIX 2

DRAWINGS OF APPLICATION SERIAL NO. 09/834,918

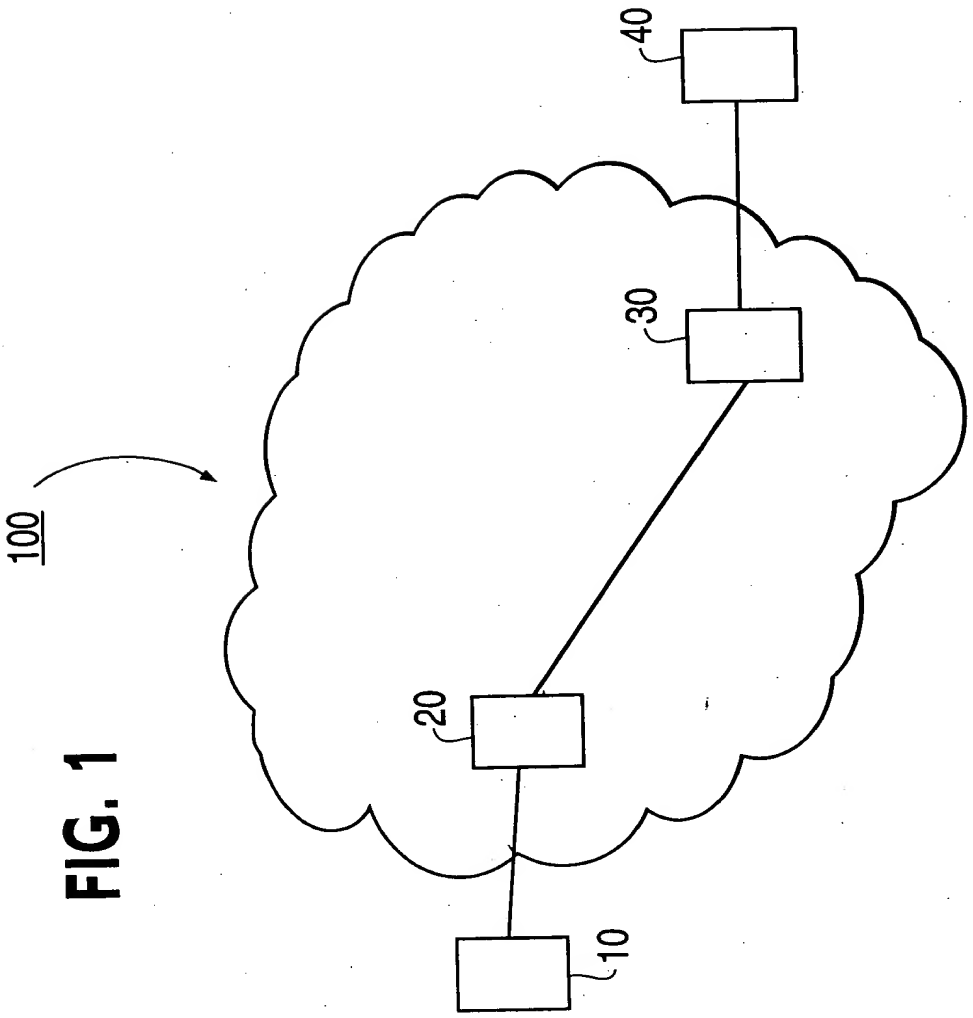


FIG. 1

FIG. 2A

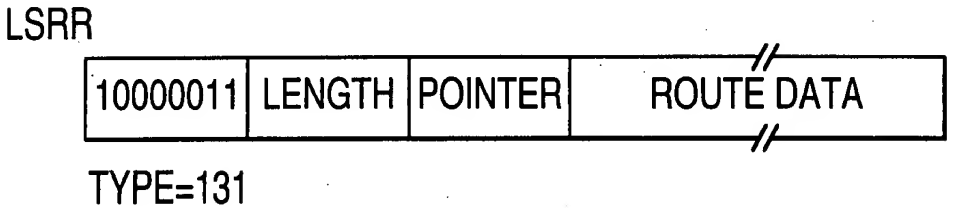

LSRR
10000011
LENGTH
POINTER
ROUTE DATA
TYPE=131

FIG. 2B

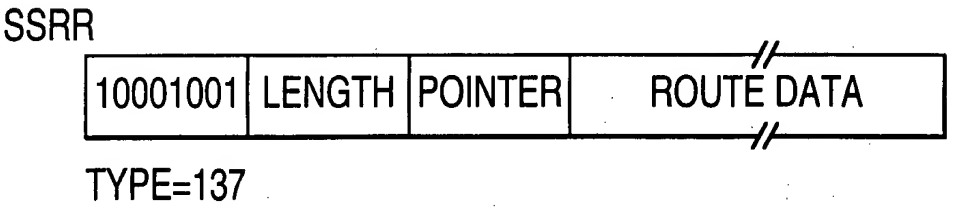

SSRR
10001001
LENGTH
POINTER
ROUTE DATA
TYPE=137

FIG. 3

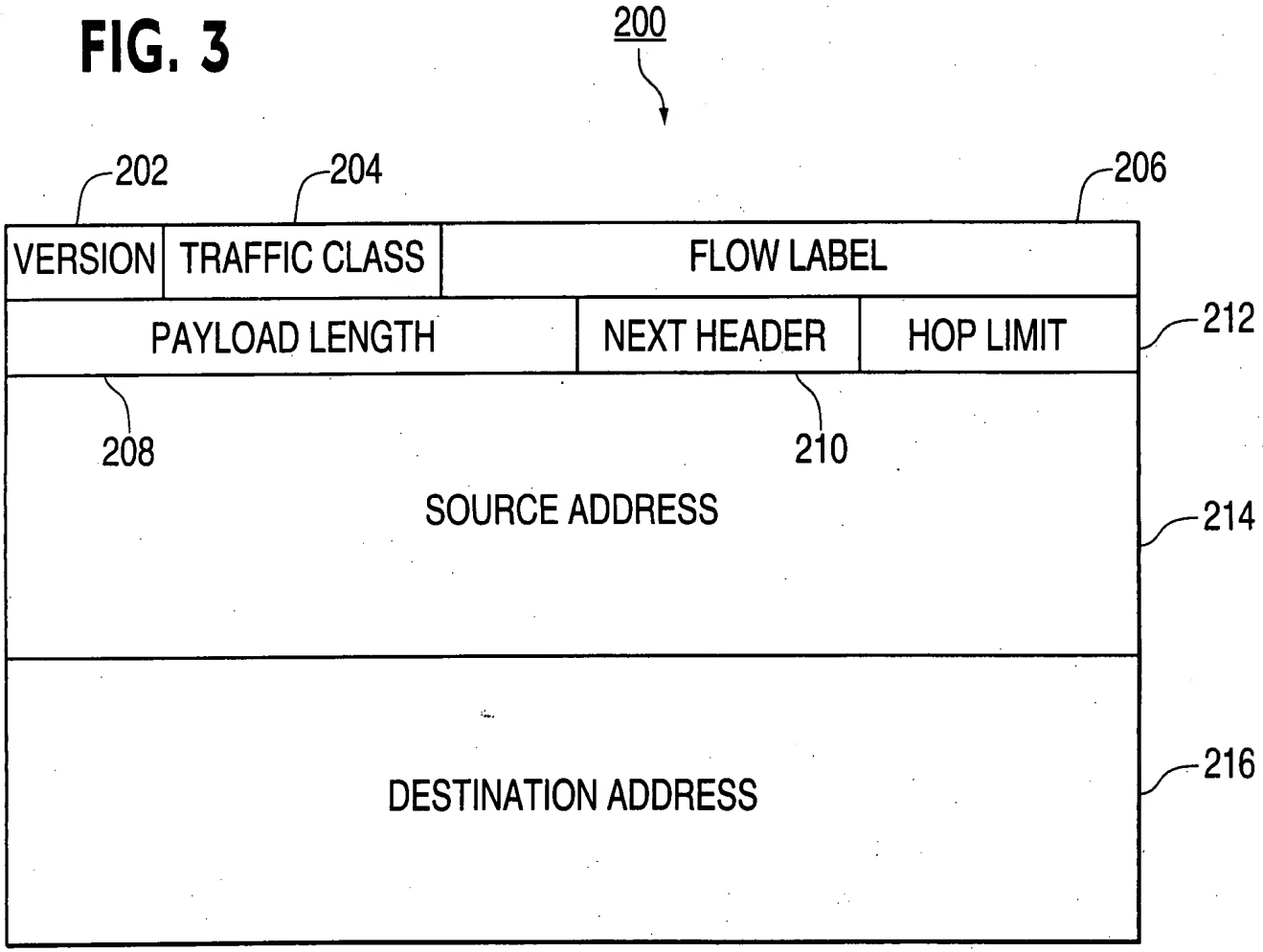

200
202
204
206
VERSION
TRAFFIC CLASS
FLOW LABEL
PAYLOAD LENGTH
NEXT HEADER
HOP LIMIT
212
208
210
SOURCE ADDRESS
214
DESTINATION ADDRESS
216

FIG. 4

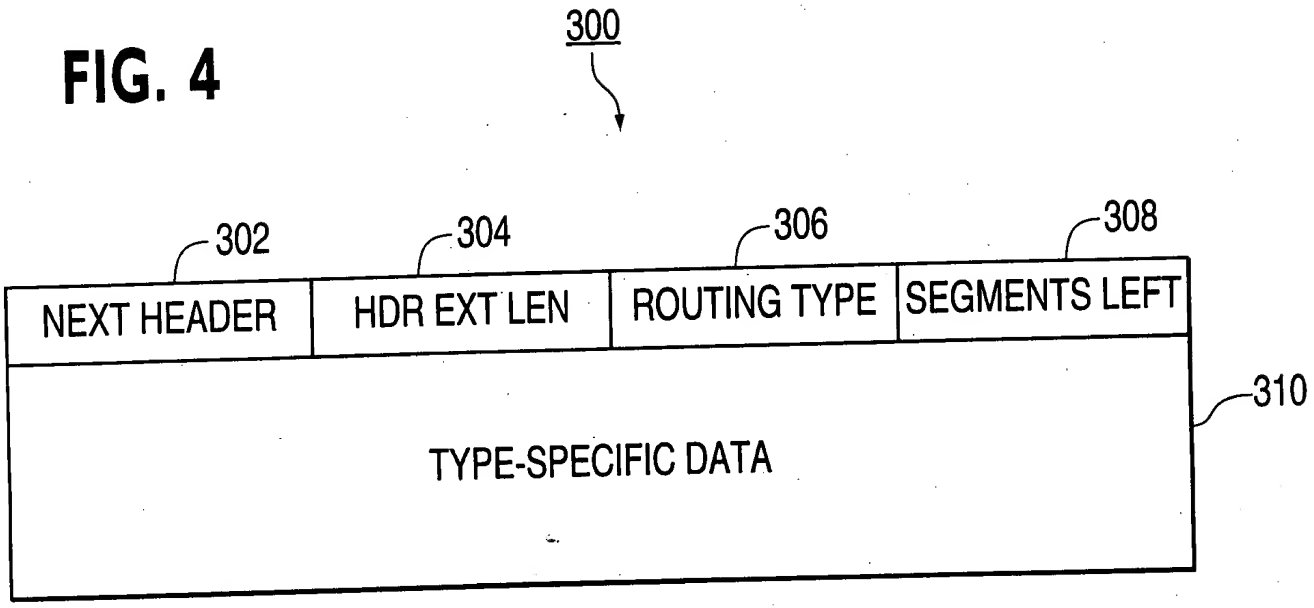
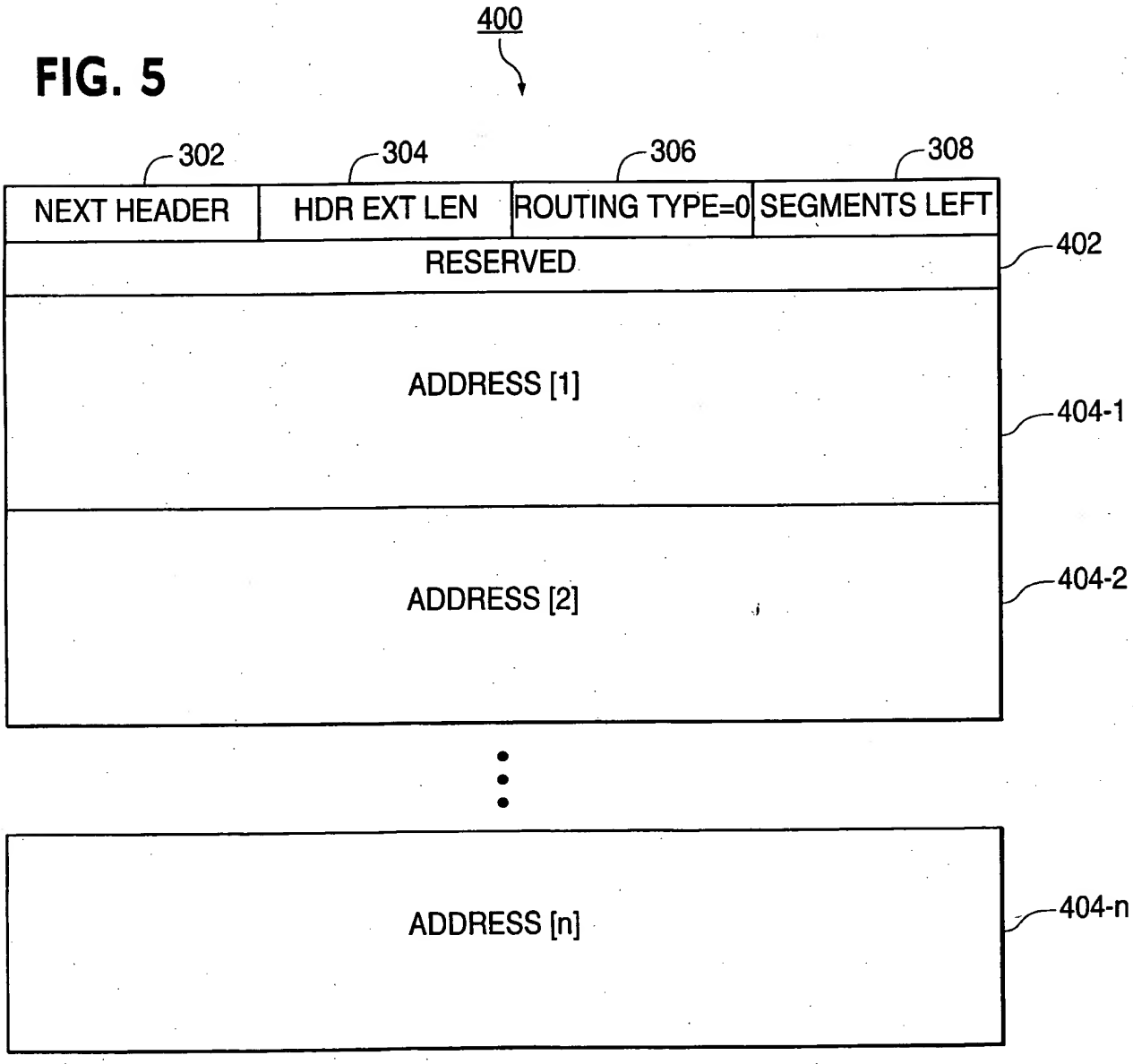

300
302
304
306
308
NEXT HEADER
HDR EXT LEN
ROUTING TYPE
SEGMENTS LEFT
310
TYPE-SPECIFIC DATA

FIG. 5


400
302
304
306
308
NEXT HEADER
HDR EXT LEN
ROUTING TYPE=0
SEGMENTS LEFT
RESERVED
402
ADDRESS [1]
404-1
ADDRESS [2]
404-2
ADDRESS [n]
404-n